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Extended micro objects as dark matter particles

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Abstract

© 2017 World Scientific Publishing Company. Models of various forms of composite dark matter (DM) predicted by particle theory and the DM constituents formed by gravity that are not reduced to new elementary particle candidates are discussed. Main attention is paid to a gravitational origin of the DM. The influence of extended mass spectrum of primordial black holes on observational limits is considered. It is shown that non-uniformly deformed extra space can be considered as point-like masses which possess only gravitational interaction with each other and with the ordinary particles. The recently discussed six-dimensional stable wormholes could contribute to the DM. The contribution of dark atoms is also considered.

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Keywords

black holes, Composite dark matter, dark atoms, extra dimensions

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